

# Use of Homotoxicology in treatment of feline hypertrophic cardiomyopathy: a clinical case report

Summarized from a more complete article cited as:  
*Palmquist R, Broadfoot P, Kari S. Use of homotoxicology and biological therapy in treatment of feline hypertrophic cardiomyopathy: a clinical case report. JAHVMA 2006;25(1):30-7.*

## Introduction

This paper documents a single case treated utilizing a biological therapeutic approach consisting of applied Homotoxicology theories, anti-homotoxic medications, nutraceutical agents and herbs. The possibility of an effective means of early intervention for cats with HCM is highly attractive and worthy of examination.

Most veterinarians offer conventional pharmaceutical therapy for these cats. Nutritional and orthomolecular treatments may gain popularity as scientific evidence of their usefulness accumulates. Pharmaceutical treatment of asymptomatic cats has not been shown to be beneficial and is controversial (Baty, 2004). Other modalities exist that may be helpful in management of these patients. Acupuncture, herbal medicine, orthomolecular medicine, gemmotherapy, chiropractic, glandular agents, whole food nutrition, flower essences, homeopathy, and Homotoxicology are some of the commonly used alternative therapies. The complete literature of these modalities can be difficult to locate and is often not included in larger databases such as PubMed<sup>1</sup>.

## Signalment

Wiley is a neutered-male, domestic short hair cat born in 1998 (eight years old). He is grey and white in color, and resides inside a metropolitan city apartment. He was vaccinated for unknown agents as a kitten and had not received any other vaccinations for three years prior to presenting to our clinic. There was no known history of prior illness. He ate a conventional dry cat food. His feline leukemia and feline immunodeficiency virus status are unknown.

## Presenting Complaint and History April 26, 2003

Wiley presented for his annual examination. On examination, his pulse, respiration and heart rate were normal. No pulse deficits or arrhythmias were noted. No gallop was noted. A heart murmur was present. An electrocardiogram and echocardiogram were recommended. The owner declined an electrocardiogram, and an echocardiogram was scheduled.

## May 2, 2003

Echocardiography by an outside echocardiologist revealed the following:

- 2D Echocardiogram:** the interventricular septum (IVS) was moderately severely thickened. The left ventricular posterior wall (LVPW) was moderate to moderately severely thickened. The left ventricle was small. The right side of the heart and the other chambers appeared relatively normal. No masses or effusions were seen. Mild systolic anterior motion of the mitral valve (SAM) was present.
- Doppler Echocardiogram:** pulmonary artery/right ventricular outflow tract (PA/RVOT) Vmax =1.49 m/s (turbulent). Aorta (Ao) Vmax=1.98 m/s (turbulent). Trivial mitral regurgitation was seen with color and spectral Doppler.
- Interpretation:** moderate to moderately severe concentric hypertrophy. Differential diagnosis included systemic hypertension, hyperthyroidism, and Idiopathic Hypertrophic Cardiomyopathy vs infiltrative myocardial disease. The acceleration in LVOT, turbulence in the pulmonary artery/right ventricular outflow tract and mitral regurgitation were likely responsible for the murmur. Secondary changes were moderate to moderately severe at that time. Evidence for significant diastolic dysfunction was not appreciated. Cats with heart disease may be at risk for thrombus formation.
- Recommendation:** consider beta-blocker therapy, blood pressure

determination and thyroid levels. Consultation with a veterinary cardiologist was suggested. Consider q3d aspirin therapy.

**5. Vital Measurements:** these measurements are summarized in Table 1. A work-up consisting of CBC, chemistry panel, T4, Doppler blood pressure and urinalysis was recommended and performed. The owner wished to wait until further tests were completed before starting drug therapy.

## May 5, 2003

CBC, chemistry and T4 values were within normal ranges. Systolic blood pressure was determined by Doppler probe and was normal (150 mmHg determined five times). Mild hematuria was noted and urine specific gravity was 1.055. No other urine chemistries were abnormal. No culture was obtained. The owner was advised of the cardiac test results and declined therapy. The client was advised that early treatment was not proven to be beneficial, and she preferred to withhold drug treatment and to recheck the echocardiogram at a later date. She was further advised that sudden deterioration, including sudden death syndrome could occur, and that she should call the office if any signs of heart failure were noted. After further discussion, the client requested a Homotoxicology approach in hopes that early intervention might reduce levels of homotoxins and slow or reverse the disease process. The client was advised that this was theoretical and not evidence-based therapy.

Therapy with antihomotoxic medicines and nutritional supplements began according to this initial prescription:

- Cor compositum<sup>®</sup>, Engystol N<sup>®</sup>, Ubichinon compositum<sup>®</sup>, Coenzyme compositum<sup>®</sup> 0.5 ml of each product given subcutaneously.
- Formula CV<sup>®</sup>, 0.5 capsule once daily PO.
- Galium-Heel<sup>®</sup>, Cralonin<sup>®</sup>, Berberis-Homaccord<sup>®</sup> mixed together and given at a rate of 5 drops PO BID.
- Owner declined other nutraceuticals (vitamin E and coenzyme Q-10), as cat was hard to medicate.
- A recheck examination was scheduled for three weeks later.

## May 22, 2003

Wiley's heart rate had decreased from his prior visit and was 140BPM (on entry to the exam room) to 120BPM once he had relaxed. His weight was 13.1 lbs. A gallop rhythm was not detectable and his murmur was unchanged. No discharges or other issues indicating regressive or progressive vicariation were evident. The decreased heart rate was encouraging and further nutraceuticals were prescribed to include:

- Coenzyme Q-10<sup>3</sup>, 30 mg per day PO.
- Vitamin E, mixed tocopherols<sup>4</sup> 100 IU/day PO.
- The May 5, 2003 prescription plan was continued unchanged.
- Recheck examination was scheduled for three weeks.

## July 27, 2003

Wiley's heart rate was stable between 140BPM on entry (excited) and 120BPM once calm. His weight had increased to 14.0 lbs. It was determined that the owner had stopped giving our Coenzyme Q-10 and was giving 50 mg per day of another brand obtained from a health food store. No gallop rhythm was noted. The prescriptions were continued and an echocardiogram was scheduled for August.

## August 27, 2003

Echocardiogram repeated by the same outside echocardiologist. Findings included:

- 2D Echocardiogram:** moderately severe hypertrophy of the LV and IVSd had increased from 7.3mm in May, 2003 to 7.8mm today).

The LV chamber size was moderately decreased. No significant valvular insufficiencies were appreciated. Cardiac contractility had increased.

- Doppler Echocardiogram:** no significant changes from May 2003 were noted.
- Interpretation:** mild progression of hypertrophy since the previous examination. The decreased LV chamber size was likely secondary to the increased concentric hypertrophy seen.
- Recommendation:** considered beginning enalapril and atenolol and adding furosemide and aldactone as needed. Consultation with a cardiologist and performing an electrocardiogram were recommended, but not elected by the client.
- Vital Measurements:** these measurements are summarized in Table 1. Tapeworms were noted and 34.5 mg of praziquantel were administered orally. An electrocardiogram and consultation with a cardiologist were recommended and accepted, but the client said she would return later after accumulating the necessary financial requirements. The client was provided with a prescription for atenolol and enalapril, and she opted to continue the homotoxicology and nutritional support. The drug prescriptions were never filled.

### October 31, 2003

The client returned for the electrocardiogram recommended in August. The cat felt fine and was active and playful. Heart rate was 174 beats per minute (BPM). The electrocardiogram showed a normal sinus rhythm. Drug therapy was discussed and declined again by the client, who asked for holistic options for this disease. A discussion ensued regarding the serious and often irreversible/progressive/fatal nature of idiopathic hypertrophic cardiomyopathy. The client understood this and opted for nutritional support and Homotoxicology only.

The following therapeutic program was prescribed at this time:

- Coenzyme Q-10, 30 mg/day PO.
- Vitamin E, mixed tocopherols 50 IU/day PO.
- Formula CV<sup>®</sup>, one half capsule per day for one week then one half capsule BID PO.
- Cor compositum<sup>®</sup>, 0.5 ml vial given subcutaneously into BL 15.
- Galium-Heel<sup>®</sup>, Cralonin<sup>®</sup>, and Berberis Homaccord<sup>®</sup> combined in a cocktail and given orally 5 drops BID 10-20 minutes before meals.
- Recheck examination recommended in 60 days.

### December 2, 2003

Wiley was refusing all but the Homotoxicology cocktail. Coenzyme Q-10 had been given "only a few times." Wiley's murmur was unchanged and his weight had declined from 14.75 lbs to 13.7 lbs. His pulse rate was rapid, and mucus membranes were normal. He was showing no exercise intolerance per the owner. Further discussion regarding medication ensued and the owner again declined cardiac pharmaceuticals.

The Homotoxicology cocktail was reformulated and dispensed consisting of equal amounts of China Homaccord<sup>®</sup>, Cralonin<sup>®</sup>, Aurumheel<sup>®</sup> with instructions to give 5 drops BID PO. The cat was difficult to medicate but continued to take the coenzyme Q-10 intermittently.

**Table 1. A summary of echocardiographic data for Wiley.**

Parameter	5-2-03	8-27-03	1-22-04	2-25-05	12-22-05
AO	10.9mm	10.9mm	11.0mm	10.9mm	10.2mm
LA	13.9mm	12.5mm	14.4mm	14.4mm	13.5mm
LA/AO ratio	1.28	1.47	1.3	1.32	1.32
EPSS	0.4mm	0.0mm	0.2mm	0.2mm	0.2mm
IVSd	7.3mm	7.8mm	7.0mm	7.2mm	7.2mm
LVIDd	10.2mm	1.38mm	8.8mm	11.8mm	12.7mm
LVPWd	5.9mm	7.8mm	8.1mm	4.8mm	5.4mm
IVSs	8.4mm	1.28mm	8.8mm	7.9mm	9.1mm
LVIDs	6.4mm	4.9mm	4.3mm	6.6mm	4.5mm
LVPWs	7.5mm	9.4mm	8.4mm	6.8mm	10.2mm
EF	72.0%	94.1%	85.9%	79.7%	94.1%
FS	37.0%	64.5%	51.2%	44.2%	64.3%
HR	197	197	147	164	160

### January 22, 2004

Echocardiogram repeated with the same outside operator. Findings included:

- 2D Echocardiogram:** chamber sizes were relatively normal. The papillary muscles were thick and hyperechoic as visualized in the transverse views. The anterior IVS dipped into the LVOT (left ventricular outflow tract). No masses or effusions were seen.
- Doppler Echocardiogram:** PA/RVOT Vmax=2.89m/s (turbulent). No regurgitation was appreciated. Ao Vmax=1.2m/s (laminar).
- Interpretation:** moderate concentric hypertrophy. *The concentric change was decreasing, however (7.3 on May 2, 2003 to 7.8 on April 27, 2003 to 7.0 today (January 22, 2004)).* The turbulence in the RVOT was likely secondary to concentric change and likely responsible for the murmur heard. The changes seen in the papillary muscles and LVPW likely represent fibrotic/remodeling changes of the cardiac muscle, however myocardial degeneration or infiltration is a consideration.
- Recommendation:** continue present therapy. Recheck echocardiogram is recommended in 12 months or as clinical signs dictate. The prognosis is fair to guarded.
- Vital Measurements:** these measurements are summarized in Table 1. The owner confessed that she was not really giving Coenzyme Q-10 to the cat, as he was resistive. Wiley had received Coenzyme Q-10 only two to three times since his last examination. The owner was thanked for giving us accurate information, and advised to continue the Homotoxicology formula and recheck in several months.

### February 25, 2005

Echocardiogram repeated with the same outside operator. Findings included:

- 2D Echocardiogram:** chamber sizes, valves and contractility appear relatively normal. The muscles appear moderately thickened. The LV was not completely closed during systole and the papillary muscles were not overly hyperechoic (relative to the previous echocardiogram). No masses or effusions were seen. IVSd=5.1-7.2 (average closer to 7.2).
- Doppler Echocardiogram:** all valves are competent. PA Vmax=1.6m/s (slightly turbulent). Ao Vmax=1.23m/s (laminar).
- Interpretation:** *the changes seen in the heart are at least static, but likely represent subtle improvement (in both muscle thickness and hemodynamics). Continue with present therapy.* The IVRT (isovolumic relaxation time) suggested diastolic dysfunction (decreased compliance), however overt diastolic failure was not appreciated. PA/RVOT outflow velocity was improved over previous echocardiograms.
- Recommendation:** recheck echo yearly or as indicated. The prognosis remains fair to guarded.

### December 22, 2005

Echocardiogram repeated with the same outside operator. Findings included:

- 2D Echocardiogram:** chamber sizes were relatively normal. The PA

was lightly dilated. The papillary muscles were large, irregular and hyperechoic as seen on previous scans. There is a small portion of the LVPW, which was thin (infarction). Contractility was good. The IVS was the same thickness (7.2 mm) as the previous study. No masses or effusions were seen. The right side of the heart appeared relatively normal. The valves appeared normal.

- Doppler Echocardiogram:** IVRT=60ms. Mitral inflow=0.69m/s with E/A superimposition. Pa Vmax=1.95m/s (moderately turbulent) Ao Vmax= 0.82m/s (moderately turbulent).
- Interpretation:** the hemodynamics were relatively normal and unchanged from previous studies. There was a small area of infarction in the LVPW. Cardiac muscle remodeling/fibrosis was evident as before. Significant diastolic dysfunction was not appreciated. Advised to maintain same treatment regime.
- Recommendation:** continue present therapy. Recheck echocardiogram was recommended in 12 months or as clinical signs dictated. The prognosis remained fair to guarded, however the disease did not appear to be significantly progressing. The infarct was cause for concern.

August 31, 2006

Wiley continues to do well in his new home. Follow-up echocardiograms are scheduled for six months.

## Discussion

Biological therapy utilizing antihomotoxic medicines in management of cardiac disease in veterinary patients has been reported anecdotally (Broadfoot, 2005), (Demers, 2005), (Palmquist, 2005). Homotoxicology formulas are well established for cardiac and vascular diseases in humans and are frequently used in European countries (Schroder, 2003).

The exploration of biological therapies in veterinary medicine is just beginning in earnest. Interest in veterinary Homotoxicology is relatively new in the United States and many cases are treated without undergoing full diagnostics making documentation difficult. Clinicians have observed clinical improvement in these patients, but it can be challenging to prove their precise effects in a clinical setting. This case clearly demonstrates the potential value of these products in a single case. This case presentation will not answer the question as to which component of the therapeutic plan was responsible for the improvement. Further studies will be needed to assess whether all parts are necessary to the successful outcome observed here. It may well be that other agents may be added to improve the rate and degree of recovery. The field is ripe for research for those with inquiring minds.

A brief review of the Homotoxicology medications used may give some insights as to their value in these cases:

- **Cor compositum<sup>®</sup>** is indicated for thickening of the walls of the ventricles with an associated increase in systolic pressure and decreased arterial flexibility. It has a wide range of action, with benefits as a stimulator of cardiac muscle compromised by fatigue and metabolic or toxic issues, particularly in geriatrics. It is useful in myocardial diseases with hypertrophy and/or cellular storage pathologies
- **Engystol N<sup>®</sup>**, though primarily considered a medication for viral disease which may in fact, be an underlying issue in some cardiac diseases, (much like Rheumatic fever in humans), has other tissue effects, and has been used in a variety of mesenchymal diseases. It owes much of its activity to *Sulphur*, which is the major ingredient in practically all cellular phases, and particularly in impregnation phases. Therefore, those cases that are unresponsive to the proper antihomotoxic medication should have *Sulphur* intermittently.
- **Ubichinon compositum<sup>®</sup>** and **Coenzyme compositum<sup>®</sup>**. These products are critical catalysts for the mitochondrial respiration chain and the citric acid cycle. The need for agents that enable the body to “jump start” the systems that provide energy for the cellular functions cannot be overstressed. Both of these preparations have far reaching implications for body organs that are as energy consumptive as the cardiac system. Their action is truly unique to the field of

Homotoxicology. Modern medicine is just awakening to the possibilities inherent in mitochondrial therapies.

- **Galium-Heel<sup>®</sup>** is a broad usage preparation which promotes detoxification of the cellular milieu.
- **Cralonin<sup>®</sup>** contains *Craetaegus* (Hawthorne) and is indicated in cases of decreased cardiac output, strict affection and tropism of cardiac tissues, for cardiac decompensation, and serves as a “heart tonic”.
- **Berberis-Homaccord<sup>®</sup>** for cardiovascular collapse and fainting attacks, thready pulse, and asthmatic constriction of the chest, which are characteristic of the *Venatrum fraction*, as well as support of the renal system, and adrenal function (Reckeweg, 2002).
- **Aurumheel<sup>®</sup>** for vegetative-functional coronary and circulatory disorders, hypotension, disturbance of the rhythm of the heart (package insert).
- **China-Homaccord<sup>®</sup>** for exhaustion and debility (package insert).

It is the authors' sincere hope that research into antihomotoxic medicines and the application of Phase Theory as created by the founder of Homotoxicology, Dr. Hans-Heinrich Reckeweg, will lead veterinarians toward more effective therapies for their cardiac patients. Broadfoot, Palmquist, and Demers currently have many cardiac patients that are responding well to treatment programs utilizing an integrative approach, and some of these have been presented in Homotoxicology training opportunities, but such cases do not appear in journals read by the majority of the members of the veterinary profession. Currently Palmquist has three other feline idiopathic HCM cases, which have shown marked clinical improvement and one demonstrating ventricular thinning in less than six weeks of therapy. It is likely that other clinicians utilizing Homotoxicology have successful case outcomes but they are not published or accessible for examination at this time.

Homotoxicologists must take responsibility for our individual case successes and see that the results are published and shared with others. While single case reports do not carry much evidentiary weight, they are of value, because from these successful outcomes it may become possible to greatly improve treatment outcomes for our patients. Researchers interested in biological therapies can use these case studies to embark on more detailed studies and ultimately on double-blind, placebo-controlled studies capable of satisfying demands for evidence-based therapies in our profession. This move is underway in Europe and is overdue here in the United States. Such studies are important to the preservation of our profession's ability to obtain satisfactory results in the management of our patients.

## FOOTNOTES

1. PubMed. www.pubmed.gov.
2. Formula CV. Rx Vitamins for Pets: Professional Veterinary Formula, Hawthorn Berry (standardized 3.2% vitexin)100mg, L-Carnitine (pharmaceutical grade amino acid)100mg, L- Taurine (pharmaceutical grade amino acid)50mg, Vitamin E (d-alpha tocopherol succinate) 75 IU, Dimethylglycine (DMG) 10 mg, Magnesium (citrate) 10 mg, Potassium (citrate) 10 mg, Coleus Forskolii 10 mg, Selenium (selenomethionine) 5 mcg.
3. Co Q10-30 softgel caps. Rx Vitamins for Pets: Professional Veterinary Formula.
4. Vitamin E Mixed Tocopherols, unknown brand, which client purchased from health food store.
5. Cor compositum<sup>®</sup>, Heel.
6. Engystol N<sup>®</sup>, Heel.
7. Ubichinon compositum<sup>®</sup>, Heel.
8. Coenzyme compositum<sup>®</sup>, Heel.
9. Galium-Heel<sup>®</sup>, Heel.
10. Cralonin<sup>®</sup>, Heel.
11. Berberis-Homaccord<sup>®</sup>, Heel.
12. Aurumheel<sup>®</sup>, Heel.
13. China-Homaccord<sup>®</sup>, Heel.

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